DOCUMENT RESUME

ED 306 833 HE 022 495

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TITLE Efficiency of Support Services within the Arizona Universities.
INSTITUTION Arizona Board of Regents, Phoenix.
PUB DATE Nov 88
NOTE 11p.; In "The Arizona Board of Regents' Task Force on Excellence, Efficiency and Competitiveness. Final Report and Working Papers." Volume Two. For Volumes One and Two, see HE 022 446-447. For individual working papers, see HE 022 448-480 and HE 022 482-501.
PUB TYPE Reports - Descriptive (141)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Administrative Policy; College Buildings; Competition; Decision Making; Educational Facilities; Educational Quality; *Efficiency; Excellence in Education; Higher Education; Nonprofessional Personnel; State Universities
IDENTIFIERS *Arizona; Arizona State University; Arizona Task Force on Excellence Efficiency Compet; Northern Arizona University; *Support Services; University of Arizona

ABSTRACT

One of the working papers in the final report of the Arizona Board of Regents' Task Force on Excellence, Efficiency and Competitiveness, this document discusses the efficiency of the Arizona state universities' support services. Faculty, staff, and students were asked to rate the quality, importance, and change in quality of the services provided by selected academic and nonacademic administrative and business operations at the universities. Fundamental issues include the fact that the universities are functioning without systematic or widespread inefficiency. However, there is inadequate information to support decision making, cumbersome processes and procedures, and inadequate performance accountability. Results are discussed according to personnel, physical resources, and procurement. At all three universities, faculty, staff, and students rate the overall quality of services to be midway between fair and good, improving slightly, with overall importance of the services considered to be high. The library is rated as the single most important supporting unit. Four recommendations are as follows: the universities should seek to reduce personnel-related paperwork and streamline personnel processes; physical resources departments should respond to user complaints of long lag times and unreasonable costs through improved services; ways should be found to demonstrate and assure that physical resources costs are competitive with the private sector; and the Arizona universities should develop systems and functions to improve the procurement process. (SM)

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EFFICIENCY OF SUPPORT SERVICES WITHIN THE ARIZONA UNIVERSITIES

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U S DEPARTMENT OF EDUCATION
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ABSTRACT

Faculty, staff, and students were asked to rate the quality, importance, and change in quality of the services provided by selected academic and nonacademic administrative and business operations at the three Arizona universities. At all three universities, faculty, staff, and students rate the overall quality of services to be midway between fair and good, improving slightly, with overall importance of the services considered to be high. Faculty and students at all three universities agreed that the single most important supporting unit is the Library. In fact, the Library is the only operation that received, overall, a very high importance rating from users at all three universities.

Based on the survey results, administrative service operations are grouped, by university, into those rated higher in quality relative to the ratings for the other units; and those rated lower in quality relative to the ratings for other units.

It is recommended that such a survey be implemented at three-year intervals to map changes in quality of service, and to correlate same with administrative decisions and actions.

The consulting firm of Coopers & Lybrand was retained to evaluate management efficiency of the universities, including management efficiency of business operations. The consultants saw no systemic or widespread inefficiency. Although they identified opportunities for improvement of specific administrative functions, overall they found dedicated, highly capable and energetic staff, managers, and executives devoting enormous amounts of time, energy, and talent in efforts to solve the day to day problems and issues facing these complex institutions. If there is a general criticism of management efficiency, it is that administrative information systems as a rule are not providing users with timely and accurate information. This has forced departments to develop and maintain their own (duplicative) records. Duplicative tracking in excess of what would be considered normal is unavoidable in research-active departments where requirements for up-to-date and accurate information on personnel, payroll, purchasing, telephone, mail, and garage are

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absolutely crucial to responsible management of state, local, and grant/contract funds.

Based in part on the user survey described above, Coopers & Lybrand chose to examine in closest detail Personnel, Physical Resources, and Procurement. With respect to Personnel, Coopers & Lybrand report faculty and staff criticism of each university's ability to recruit and hire faculty and staff in a timely manner, and to reclassify staff positions.

With respect to Physical Resources, facilities were found to be clean, the grounds well maintained, and the quality of renovation work up to expectations. However, Coopers & Lybrand report widespread customer dissatisfaction with the high costs and long lead times associated with renovations. They observe that relationships between Physical Resources and user departments are strained. Customers believe that costs charged by Physical Resources on each of the three campuses are not competitive with market prices. Coopers & Lybrand conclude that work estimates and job tracking are inadequate in light of industry norms.

With respect to procurement, the primary complaint of customers at all three universities is the inability of the existing system to respond to needs in a timely fashion. Coopers & Lybrand believe that the procurement functions are overly dependent on manual, paper-intensive systems which cause unnecessary effort and delay, and which provide inadequate information and performance measurements. The process tends to deal with requisitions sequentially and has difficulty sorting transactions according to size, priority, and complexity. The same signatures, verifications, buyer handling, and data entry take place for almost all purchases, whether $50 or $50,000.

RECOMMENDATIONS

The universities should seek to reduce personnel-related paperwork and streamline Personnel processes. University Physical Resources Departments should respond to user complaints of long lag times and unreasonable costs through improved services. Ways should be found to demonstrate and assure that Physical Resources costs are competitive with the private sector. The Arizona universities should develop systems and functions to improve the procurement process. Goals, objectives, and priorities should be established based in part on communication with key customer groups and vendors.

SURVEY OF FACULTY, STAFF AND STUDENT OPINION

Faculty, staff, and students were asked to rate the quality, importance, and change in quality of the services provided by selected academic and nonacademic administrative and business operations at the three Arizona universities. Methods, data, and results are presented in the EEC working paper entitled "Survey of Administrative Service Operations at the University of Arizona, Arizona State University, and Northern Arizona University" (2 volumes). A total of 875 faculty/ staff questionnaires and 524 student questionnaires were received, representing returns of 57% and 35%, respectively. At all three universities, faculty, staff, and students rate the overall quality of services to be midway between fair and good, improving slightly, with overall

importance of the services considered to be high. No significant differences were found to exist in the overall ratings of quality of administrative service operations for each university.

Based on the results of the survey, administrative service operations at each university were grouped into those rated higher in quality relative to the ratings for the other units (Table 1); and those rated lower in quality relative to the ratings for the other units (Table 2).

Units Rated Higher in Quality Relative to Other Units — Table 1

UA	ASU	NAU
		Academic Vice President's Office
Bookstore	Bookstore	Bookstore
	Academic Computing	Academic Computing
	Cultural Events	Cultural Events
Dean of Student's Office		
Fast Copy Center	Fast Copy Center	Fast Copy Center
Food Services		
Garage/Motorpool		Garage/Motorpool
	Graduate College Office	Graduate College Office
Grounds Maintenance	Grounds Maintenance	Grounds Maintenance
Library	Library	Library
Payroll	Payroll	Payroll
	Personnel	Personnel
Printing/Reproductions	Printing/Reproductions	Printing/Reproductions
Risk Management		
Security/Police	Security/Police	
Sponsored Projects		Sponsored Projects
Student Health	Student Health	Student Health
	Telephone	Telephone

Higher quality marks for administrative service operations at The University of Arizona go to Bookstore, Dean of Students Office, Fast Copy Center, Food Services, Garage/ Motorpool, Grounds Maintenance, Library, Payroll, Printing/ Reproductions, Risk Management, Security/ Police, Sponsored Projects, and Student Health. Lower quality marks go to Academic Computing, Core Accounting, Custodial Services, Financial Aid Office, Graduate College Office, Mail Service, Parking, Personnel, Planning/ Construction, Purchasing, Repair/ Remodeling, and Residence Halls.

Higher quality marks for administrative service operations at Arizona State University go to Bookstore, Academic Computing, Cultural Events, Fast Copy Center, Graduate College Office, Grounds Maintenance, Library, Payroll, Personnel, Printing/ Reproductions, Security/ Police, Student Health, and Telephone. Lower quality marks go to Dean of Student's Office, Core Accounting, Custodial Services, Financial Aid Office, Food Services, Mail Service, Parking, Planning/ Construction, Purchasing, Repair/ Remodeling, Residence Halls, and Risk Management.

Higher quality marks for administrative service operations at Northern Arizona University go to Academic Vice President's Office, Bookstore, Academic Computing, Cultural Events, Fast Copy Center, Garage/ Motorpool, Graduate College Office, Grounds Maintenance, Library, Payroll, Personnel, Printing/ Reproductions, Sponsored Projects, Student Health, and Telephone. Lower quality marks go to Affirmative Action

Office, Dean of Students Office, Administrative Computing, Core Accounting, Custodial Services, Financial Aid Office, Food Services, Mail Service, Parking, Planning/ Construction, Repair/ Remodeling, Risk Management, and Stores.

Faculty and students at all three universities agreed that the single most important supporting unit is the Library.

In fact the Library is the only operation that received, overall, a very high importance rating from users at all three universities. Staff regard Telephone, Mail, Security/ Police, and Payroll as especially important. Operations other than the benchmark to help evaluate

Table 2

Units Rated Lower in Quality Relative to Other Units

UA	ASU	NAU
Academic Computing	Dean of Student's Office	Affirmative Action Office Dean of Student's Office
Core Accounting Custodial Services Financial Aid Office	Core Accounting Custodial Services Financial Aid Office Food Services	Administrative Computing Core Accounting Custodial Services Financial Aid Office Food Services
Graduate College Office Mail Service Parking Personnel Planning/Construction Purchasing Repair/Remodeling Residence Halls	Mail Service Parking Planning/Construction Purchasing Repair/Remodeling Residence Halls Risk Management	Mail Service Parking Planning/Construction Repair/Remodeling Risk Management Stores
Telephone		

Library that are viewed as especially important by students are Registration and Records, Student Health, Financial Aid, and Parking.

We recommend that a survey of the type described in "Survey of Administrative Service Operations ..." be conducted at three year intervals in order to track changes in quality through time. The user survey data collected in this initial pilot study would then provide a administrative decisions and actions that impact distribution of resources and changes in organization, leadership, and policy. For example, at the present time the University of Arizona is constructing three parking garages on campus, the first ever. How will this investment of resources, and subsequent management of resources, be reflected in the next user survey of the quality, change in quality, and importance of Parking as viewed by University of Arizona faculty, staff, and students? Will user perception of quality of Parking climb? If so, by how much? Based on longitudinal studies of user opinion, can we eventually conclude what in fact is an acceptable rating for quality of Parking?

EVALUATION OF MANAGEMENT EFFICIENCY BY OUTSIDE CONSULTANT

Fundamental Issues

The consulting firm of Coopers & Lybrand was retained to evaluate management efficiency of the universities, including the management efficiency of the business operations. They found that the universities are

functioning without systemic or widespread inefficiency.

However, Coopers & Lybrand identify three issues that bear importantly on management efficiency:

1. Inadequate information to support decision making;

2. Cumbersome processes and procedures; and

3. Inadequate performance accountability.

These issues tend to prevent the highly capable, energetic personnel at the three universities to operate as effectively as they might.

It immediately became apparent to Coopers & Lybrand consultants that administrative information systems as a rule have not kept pace with user needs for timely and accurate information. This has forced departments to develop and maintain their own records. Academic and nonacademic departments rely less and less on the information contained in the central computer systems. As a result, personnel, capital equipment, and space resources that might otherwise be invested in direct back-up technical support for teaching, research, or public service must be invested in additional "business service" requirements.

What normally would be considered excessive duplicative tracking is presently unavoidable in research-active departments where requirements for up-to-date and accurate information on personnel, payroll, purchasing, telephone, and garage are absolutely crucial to responsible management of state, local, and grant/ contract funding. The need for duplicative tracking intensifies during times of budget cutbacks, when departments must watch every expenditure as they try to maintain their normal levels of teaching, research, and public service while operating on significantly reduced budgets.

Coopers & Lybrand recommends that the universities develop and strengthen their capacity to manage the information needs of academic and nonacademic departments. The universities should develop policies on collection and ownership of data, on access, use, and security of data, and on standardized definitions and units of measure for commonly used data. In addition, universities should identify the information needs held in common by departments, and should develop database systems to communicate data and information.

Coopers & Lybrand's awareness of cumbersome processes and inadequate performance accountability arose primarily through close review of the Personnel, Physical Resources, and Procurement offices at each of the three universities. These operations were singled out for review on the basis of what was learned during the early interviews conducted with faculty, staff, administrators, and business managers, and on the basis of the results of the user survey described above.

PERSONNEL

Coopers & Lybrand became aware of faculty and staff criticism of each university's ability to recruit and hire faculty and staff in a timely manner, and to reclassify staff positions. They found that the problem is especially acute for research-oriented departments that depend on specialized technical staff hired for sponsored research projects of limited duration. Some researchers

complained that it normally took six months to get new employees on board because of delays in personnel paperwork and procedures. Coopers & Lybrand found it is easy to understand why things take so long, given for example the large number of signatures required on personnel action request forms even before job posting and recruiting can begin. In one example reviewed, a routine personnel requisition for a clerk typist was submitted on September 30, 1987, yet formal approval was not received until November 2, 1987, because of time taken by the unusually large number of people who had to review and sign-off on the document. Cases in which it has taken as long as two years to get a position reclassified are not uncommon.

According to Coopers & Lybrand, some of the inefficiencies in Personnel have arisen through duplicative activities spread among a number of departments throughout each university. Each university has established its own methods for dealing with recordkeeping and recordprocessing requirements as the needs have arisen. Coopers & Lybrand note that there is a fragmentation of personnel responsibilities in areas such as compensation, employee benefits, and the routing of recruiting applications.

Coopers & Lybrand recommends that each university adopt a policy for recruiting which would centralize responsibility for the recruiting function. Furthermore, they believe the universities should seek to reduce personnel paperwork and to streamline personnel processes. For example, the number of signatures required on personnel action request documents should be fewer in number, and employee appraisal forms should be reduced in complexity, number, and size.

PHYSICAL RESOURCES

Physical Resources management at the Arizona universities is a $60,000,000 a year operation responsible for the care, upkeep, and renovation of 800 buildings sited on almost 2,000 acres of land with a combined estimated replacement value of $1,600,000,000. The Physical Resources Departments of the three universities employ approximately 1,300 people ranging from custodians and grounds-keepers to highly qualified specialists and administrators.

Coopers & Lybrand notes that facilities were found to be clean, the grounds well maintained, and the quality of renovation work up to expectations. However, they also report widespread customer dissatisfaction with the high costs and long lead times associated with renovations. As a result, the relationships between Physical Resources and user departments are strained.

Customers believe that the fees charged by Physical Resources on each of the three campuses are not competitive with market prices. Bills do not always provide a clear picture of costs and are criticized as arriving too late for customers to question the contents. The universities do not appear to have established cost-effectiveness objectives for their Physical Resources Departments.

Coopers & Lybrand urges that ways be found to demonstrate and assure customers that Physical Resources costs are as competitive as possible with the private sector. Physical Resources Departments should develop capabilities to support users in incorporating

practical, realistic budgets for renovations into decision package proposals and into grant proposals. More consistent and better understood chargeback policies should be developed, and Physical Resources Departments should clearly define consistent policies and guidelines for determining building and customer charges for service. The universities should explore the use of standard prices for common projects, expanded use of outside contractors for specialized services, and the implementation of "handyman" programs to take care of small jobs in short order.

According to Coopers & Lybrand, unnecessarily low thresholds imposed by state statute requiring competitive procurement of outside maintenance and repair services are wasting time and money. The human efforts and time delays associated with bid document preparation for very small jobs may cost as much as the contracted work itself. Under present conditions, management has no flexibility to explore whether certain jobs over $10,000 could be more efficiently accomplished in-house or through contract to an outside firm. Coopers & Lybrand note that many public universities in other states impose no such dollar limits on physical resource departments.

Given such costly rigidity, Coopers & Lybrand recommend that the $10,000 threshold for competitive bidding of building renovations be increased to $50,000 in order to allow Physical Resource management the flexibility of completing jobs in-house or contracting outside vendors. This will require legislative action. Jobs falling between $10,000 and $50,000 can be done in-house, contracted to a vendor, or competitively bid between in-house and private sector bidders. Jobs estimated between $50,000 and $100,000 should be competitively bid, but on a shortened form.

Coopers & Lybrand believes that the timeliness and productivity of Physical Resources Departments at all three universities could be improved. Existing work estimating and job tracking systems are inadequate. Communicating to customers about job priority and job timing is poorly done. No competitive testing of timeliness of service delivery is being conducted. Large work backlogs exist in some trades, yet no outlets exist for peak workload demands other than expensive overtime and very limited contracting out.

The timeliness, productivity, and customer relations of Physical Resources Departments at all three universities could be improved with more automation, specific performance standards, and better communication. Performance measures and reporting systems could be emplaced to monitor and control productivity, quality, and timeliness, and to arrange jobs in order of priority. Specific response-time performance criteria should be established for standard jobs. Jobs which cannot be designed and completed within the requirements specified by the customer should be considered for competitive bids.

In order to improve service, Physical Resources Departments should develop capabilities to support users in developing practical, workable timetables for renovations, and to deliver on the schedule that is established. Information systems should be developed at all three universities to track work requisitions, their stage of completion, estimates to complete, actual completions, and

variances. Information on total "throughput" time should be systematically collected, analyzed, and reported to senior university executives. In fact, each university's leadership should periodically establish and monitor priorities among the various jobs that originate in the teaching and research components of the universities.

Coopers & Lybrand suggests that each university establish a policy review board of university officials and academicians to advise the Vice President for Business Affairs Administration to resolve complaints about poor performance (cost, timeliness, or quality), and to communicate user suggestions for possible improvements. Furthermore, Coopers & Lybrand observes that the relationship between Physical Resource Departments and academic departments could be strengthened through periodic meetings.

PROCUREMENT

In 1986-87, the Arizona universities procured over $220,000,000 in goods and services in support of academic, administrative, and research activities. Customers at all three universities complain about the inability of the existing system to respond to needs in a timely fashion. Coopers & Lybrand found that the procurement functions are overly dependent upon manual, paper-intensive systems which cause unnecessary effort and delay, and which provide inadequate information and performance measurements. The process tends to deal with requisitions sequentially and has difficulty sorting transactions according to size, priority, and complexity. The same signatures, verifications, buyer handling, and data entry take place for almost all purchases, whether $50 or $50,000.

Coopers & Lybrand notes that the purchasing function is centralized at each university, but the process for managing procurement transactions and expenditures involves a variety of departments within several organizational divisions of each university. Each department within the process performs certain activities which contribute to overall result, but customers must locate and deal with several individual components of the procurement process to fulfill basic needs and resolve problems.

Coopers & Lybrand describes this type of procurement process as a control system that happens to provide a service, rather than a service enterprize with built-in controls.

Senior management at each Arizona university has historically assigned a low priority to paperwork reduction and process efficiency through the automating purchasing. The procurement process is thus mired in paperwork and desktop bottlenecks, diminishing both customer service and buying effectiveness. Each requisition sits in a variety of queues as it is handled within the procurement process. Rudimentary departmental management information in the procurement area is therefore either unavailable or very difficult to collect, resulting in management based on "gut feel" rather than on facts.

Coopers & Lybrand concludes that the fragmented, control-oriented, paper-bound procurement systems are hampering overall university effectiveness by placing troublesome and time consuming barriers in the path of the day-to-day business of faculty, staff, and administration.

Examples of information the universities were unable to provide to Coopers & Lybrand included number of purchase requisitions processed, number of vendors, volume per vendor, purchase requisition turnaround time, and distribution of the number and amount of purchases by size. Data are not being analyzed to identify customer purchasing patterns, typical commodities needed, and predictable or seasonal procurement requirements. Although the requisition, review, and approval process may vary depending on the originating department, the typical purchasing requisition makes several stops before its arrival in purchasing. Included in the process may be a department head, a dean or vice president, president, contracts and grants accounting, general accounting, purchasing, and accounts payable.

The fragmented and procedural orientation of the process does not enable the universities to effectively provide customer services and to manage vendor relations. Customers must deal with individual components of the procurement process to fulfill basic procurement needs and to resolve problems. Tracking down the status of a requisition can be time consuming and frustrating in such an environment. Many customers complained that unless they kept checking on the status of their orders, the orders were put aside and eventually were buried or lost under stacks of paper. From a customer perspective, the processes were described as bureaucratic, unresponsive, and burdensome. At each university the process is widely viewed as an obstacle that must be overcome or avoided in conducting day-to-day operations of the university departments. For those who manage and work within the process, it is a source of frustration. High transaction volumes, customer complaints about service levels and tension between departments contribute to defensiveness and hamper effectiveness.

Coopers & Lybrand recommend that the Arizona universities should develop systems and functions to improve overall coordination and control of the entire procurements process. Each of the universities should appoint a senior executive to oversee the overall procurement process. This individual should have line authority over some components of the procurement process (e.g., purchasing and contracting) and staff authority over the entire range of procurement functions. Each university should define and establish information requirements and develop reporting systems to support, monitor, and control the procurement process as a whole. Each university should strive to improve the buyer/ customer relationships and university/ vendor relationships.

The procurement manager should have responsibility for establishing goals, objectives, and priorities for procurement. He/ she should be given authority to implement changes and improvements in consultation with other responsible managers. He/ she should meet with key customer groups and vendors to ensure that objectives are understood and met. Procurement information systems at each university should produce the basic information, such as overall processing time; number and value of purchase orders processed, by category; requisitions received; percentage of purchase orders awarded; requisitions backlog analysis; and average purchase order processing time.

RECOMMENDATIONS

- The universities should seek to reduce personnel-related paperwork and streamline personnel processes. The number of signatures required on personnel action request documents should be reduced significantly.

- Physical Resources Departments should respond to user complaints of long lag times and unreasonable costs through improved services.

- Ways should be found to demonstrate and assure that Physical Resources costs are competitive with the private sector.

- The Arizona universities should develop systems and functions to improve the procurement process. Goals, objectives, and priorities should be established based in part on communication with key customer groups and vendors.